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NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB  
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saved answer sets no longer valid  
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY  
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NEWS 16 Aug 08 CANCERLIT reload  
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN  
NEWS 18 Aug 08 NTIS has been reloaded and enhanced  
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now available on STN  
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NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded  
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced  
NEWS 23 Sep 03 JAPIO has been reloaded and enhanced  
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file  
NEWS 25 Sep 16 CA Section Thesaurus available in CAPLUS and CA  
NEWS 26 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985  
NEWS 27 Oct 21 EVENTLINE has been reloaded  
NEWS 28 Oct 24 BEILSTEIN adds new search fields  
NEWS 29 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN  
NEWS 30 Oct 25 MEDLINE SDI run of October 8, 2002  
NEWS 31 Nov 18 DKILIT has been renamed APOLLIT  
NEWS 32 Nov 25 More calculated properties added to REGISTRY  
NEWS 33 Dec 02 TIBKAT will be removed from STN  
NEWS 34 Dec 04 CSA files on STN  
NEWS 35 Dec 17 PCTFULL now covers WP/PCT Applications from 1978 to date  
NEWS 36 Dec 17 TOXCENTER enhanced with additional content  
NEWS 37 Dec 17 Adis Clinical Trials Insight now available on STN  
NEWS 38 Dec 30 ISMEC no longer available  
NEWS 39 Jan 13 Indexing added to some pre-1967 records in CA/CAPLUS  
NEWS 40 Jan 21 NUTRACEUT offering one free connect hour in February 2003  
NEWS 41 Jan 21 PHARMAML offering one free connect hour in February 2003  
NEWS 42 Jan 29 Simultaneous left and right truncation added to COMPENDEX,  
ENERGY, INSPEC  
NEWS 43 Feb 13 CANCERLIT is no longer being updated  
NEWS 44 Feb 24 METADEX enhancements  
NEWS 45 Feb 24 PCTGEN now available on STN

NEWS 46 Feb 24 TEMA now available on STN  
NEWS 47 Feb 26 NTIS now allows simultaneous left and right truncation  
NEWS 48 Feb 26 PCTFULL now contains images  
NEWS 49 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results

NEWS EXPRESS January 6 CURRENT WINDOWS VERSION IS V6.01a,  
CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),  
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FILE 'WPIDS' ENTERED AT 15:07:48 ON 14 MAR 2003  
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=> s integrative transformants  
L1 41 INTEGRATIVE TRANSFORMANTS

=> s reinterated ribosomal DNA  
L2 0 REINTERATED RIBOSOMAL DNA

=> s ribosomal DNA  
L3 16927 RIBOSOMAL DNA

=> s 13 and reiterated  
L4 50 L3 AND REITERATED

=> s 11 and 14  
L5 0 L1 AND L4

=> s 14 and yeast  
L6 13 L4 AND YEAST

=> d 16 ti abs ibib tot

L6 ANSWER 1 OF 13 MEDLINE

TI Replicon size of **yeast ribosomal DNA**.

AB The ribosomal RNAs of the **yeast** *Saccharomyces cerevisiae* are transcribed from a 9K bp stretch of DNA which is **reiterated** about 120-fold in a continuous array, about 360 microns long, on chromosome XII. Although ARS activity has been detected in the repeat unit, the size and disposition of replicons along this array of identical genes has not hitherto been determined. We have used immobilised rRNA as a probe to examine the size of radioactively labelled rDNA replicons resolved on alkaline sucrose gradients. The replicons were found to be uniformly sized, about 5 repeat units in length, and groups of 4 adjacent replicons may be activated simultaneously. These observations suggest that replicon initiation events are not determined solely by the recognition of specific DNA sequences that function as origins of replication.

ACCESSION NUMBER: 85035837 MEDLINE

DOCUMENT NUMBER: 85035837 PubMed ID: 6387390

TITLE: Replicon size of **yeast ribosomal DNA**.

AUTHOR: Walmsley R M; Johnston L H; Williamson D H; Oliver S G  
SOURCE: MOLECULAR AND GENERAL GENETICS, (1984) 195 (1-2) 260-6.

Journal code: 0125036. ISSN: 0026-8925.

PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of  
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 198411

ENTRY DATE: Entered STN: 19900320

Last Updated on STN: 19900320

Entered Medline: 19841126

L6 ANSWER 2 OF 13 MEDLINE

TI Simple Mendelian inheritance of the **reiterated ribosomal DNA of yeast**.

AB A diploid strain of **yeast** (*Saccharomyces cerevisiae*) was found to be heterozygous for two forms of the highly repetitious **ribosomal DNA**. These forms could be distinguished by the pattern of fragments produced after digestion with the site-specific restriction endonuclease EcoRI. The mode of inheritance of **ribosomal DNA** was determined by tetrad analysis. Of 14 tetrads analyzed, 12 clearly showed the **ribosomal DNA** forms segregating as a single Mendelian unit. The simplest interpretation of this result is that all of the approximately 100 copies of the **ribosomal DNA** genes of the **yeast** cell are located on one chromosome and that meiotic recombination within these genes is suppressed. Two of the 14 tetrads showed the segregation patterns expected as the result of mitotic recombination within the **ribosomal DNA**.

ACCESSION NUMBER: 78053057 MEDLINE  
 DOCUMENT NUMBER: 78053057 PubMed ID: 337310  
 TITLE: Simple Mendelian inheritance of the reiterated  
 ribosomal DNA of yeast.  
 AUTHOR: Petes T D; Botstein D  
 SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE  
 UNITED STATES OF AMERICA, (1977 Nov) 74 (11) 5091-5.  
 Journal code: 7505876. ISSN: 0027-8424.  
 PUB. COUNTRY: United States  
 DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 197801  
 ENTRY DATE: Entered STN: 19900314  
 Last Updated on STN: 19900314  
 Entered Medline: 19780127

L6 ANSWER 3 OF 13 WPIDS (C) 2003 THOMSON DERWENT  
 TI Yeast which ferments xylose to ethanol - comprising xylitol  
 reductase, xylitol dehydrogenase and xylulokinase genes integrated at each  
 of its multiple reiterated ribosomal DNA  
 sites.

AN 1997-558974 [51] WPIDS

AB WO 9742307 A UPAB: 19991020

Novel yeast which ferments xylose to ethanol, comprises: (a)  
 xylose reductase (XR), xylitol dehydrogenase (XD) and xylulokinase (XK)  
 genes integrated at each of its multiple reiterated  
 ribosomal DNA sites; (b) multiple copies of exogenous  
 DNA, including XR, XD, and XK genes, fused to non-glucose inhibited  
 promoters integrated into its chromosomal DNA, where the yeast  
 simultaneously ferments glucose and xylose to ethanol; or (c) multiple  
 copies of an introduced DNA containing XR, XD and XK genes, where the  
 yeast ferments xylose to ethanol, where the yeasts of (b) and (c)  
 retain their capacity for fermenting xylose to ethanol when cultured under  
 non-selective conditions for at least 20 generations.

USE - The methods can produce yeast, which even upon  
 culture in non-selective medium for multiple generations, e.g. up to 20,  
 retain their full capability to ferment xylose to ethanol.

Dwg.0/12

ACCESSION NUMBER: 1997-558974 [51] WPIDS

DOC. NO. CPI: C1997-178545

TITLE: Yeast which ferments xylose to ethanol -  
 comprising xylitol reductase, xylitol dehydrogenase and  
 xylulokinase genes integrated at each of its multiple  
 reiterated ribosomal DNA  
 sites.

DERWENT CLASS: D16 D17 E17 H06

INVENTOR(S): CHEN, Z; HO, N W Y

PATENT ASSIGNEE(S): (PURD) PURDUE RES FOUND

COUNTRY COUNT: 76

PATENT INFORMATION:

| PATENT NO  | KIND DATE  | WEEK | LA | PG |
|------------|--|------|----|----|
| WO 9742307 | A1 19971113 (199751)*  | EN   | 66 |    |
| RW:        | AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT<br>SD SE SZ UG   |      |    |    |
| W:         | AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE<br>HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX<br>NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN YU |      |    |    |
| AU 9728301 | A 19971126 (199813)  |      |    |    |
| EP 898616  | A1 19990303 (199913)   | EN   |    |    |
| R:         | AT BE DE DK ES FI FR GB GR IE IT NL PT SE  |      |    |    |
| CN 1225125 | A 19990804 (199949)  |      |    |    |

JP 2000509988 W 20000808 (200043) 50  
 MX 9809223 A1 19990701 (200061)  
 AU 731102 B 20010322 (200122)  
 BR 9710963 A 20010731 (200146)

APPLICATION DETAILS:

| PATENT NO       | KIND | APPLICATION    | DATE     |
|-----------------|------|----------------|----------|
| WO 9742307      | A1   | WO 1997-US7663 | 19970506 |
| AU 9728301      | A    | AU 1997-28301  | 19970506 |
| EP 898616       | A1   | EP 1997-922698 | 19970506 |
|                 |      | WO 1997-US7663 | 19970506 |
| CN 1225125      | A    | CN 1997-196195 | 19970506 |
| JP 2000509988 W |      | JP 1997-540153 | 19970506 |
|                 |      | WO 1997-US7663 | 19970506 |
| MX 9809223      | A1   | MX 1998-9223   | 19981105 |
| AU 731102       | B    | AU 1997-28301  | 19970506 |
| BR 9710963      | A    | BR 1997-10963  | 19970506 |
|                 |      | WO 1997-US7663 | 19970506 |

FILING DETAILS:

| PATENT NO       | KIND             | PATENT NO  |
|-----------------|------------------|------------|
| AU 9728301      | A Based on       | WO 9742307 |
| EP 898616       | A1 Based on      | WO 9742307 |
| JP 2000509988 W | Based on         | WO 9742307 |
| AU 731102       | B Previous Publ. | AU 9728301 |
|                 | Based on         | WO 9742307 |
| BR 9710963      | A Based on       | WO 9742307 |

PRIORITY APPLN. INFO: US 1996-16865P 19960506

L6 ANSWER 4 OF 13 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.  
 TI Simple Mendelian inheritance of the **reiterated ribosomal DNA of yeast**.  
 ACCESSION NUMBER: 78243218 EMBASE  
 DOCUMENT NUMBER: 1978243218  
 TITLE: Simple Mendelian inheritance of the **reiterated ribosomal DNA of yeast**.  
 AUTHOR: Petes T.D.; Botstein D.  
 CORPORATE SOURCE: Dept. Biol., MIT, Cambridge, Mass. 02139, United States  
 SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (1977) 74/11 (5091-5095).  
 CODEN: PNASA6  
 COUNTRY: United States  
 DOCUMENT TYPE: Journal  
 FILE SEGMENT: 022 Human Genetics  
 LANGUAGE: English

L6 ANSWER 5 OF 13 DGENE (C) 2003 THOMSON DERWENT  
 TI **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated ribosomal DNA** sites  
 AN AAV12824 DNA DGENE  
 AB This sequence represents an amplification primer for the **yeast** 5S rDNA sequence. The amplified sequence can be used in the **yeast** of the invention, which ferments xylose to ethanol. The **yeast** comprises: (a) xylose reductase (XR), xylitol dehydrogenase (XD) and xylulokinase (XK) genes integrated at each of its multiple **reiterated ribosomal DNA** sites; (b) multiple copies of exogenous DNA, including XR, XD, and XK genes, fused to

non-glucose inhibited promoters integrated into its chromosomal DNA, where the **yeast** simultaneously ferments glucose and xylose to ethanol; or (c) multiple copies of an introduced DNA containing XR, XD and XK genes, where the **yeast** ferments xylose to ethanol; the yeasts of (b) and (c) retain their capacity for fermenting xylose to ethanol when cultured under non-selective conditions for at least 20 generations. The **yeast** is produced by integrating multiple copies of exogenous DNA into **reiterated** chromosomal DNA of cells. The **yeast** produced by the integration method, even upon culture in non-selective medium for multiple generations (e.g. up to 20), retain their full capability to ferment xylose to ethanol.

ACCESSION NUMBER: AAV12824 DNA DGENE

TITLE: **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated** ribosomal DNA sites

INVENTOR: Chen Z; Ho N W Y

PATENT ASSIGNEE: (PURD) PURDUE RES FOUND.

PATENT INFO: WO 9742307 A1 19971113

66p

APPLICATION INFO: WO 1997-US7663 19970506

PRIORITY INFO: US 1996-16865 19960506

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 1997-558974 [51]

L6 ANSWER 6 OF 13 DGENE (C) 2003 THOMSON DERWENT

TI **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated** ribosomal DNA sites

AN AAV12829 DNA DGENE

AB This sequence is an amplification primer for the **yeast** Tn903 kanamycin resistance gene. The amplified sequence can be used in the **yeast** of the invention, which ferments xylose to ethanol. The **yeast** comprises: (a) xylose reductase (XR), xylitol dehydrogenase (XD) and xylulokinase (XK) genes integrated at each of its multiple **reiterated** ribosomal DNA sites; (b) multiple copies of exogenous DNA, including XR, XD, and XK genes, fused to non-glucose inhibited promoters integrated into its chromosomal DNA, where the **yeast** simultaneously ferments glucose and xylose to ethanol; or (c) multiple copies of an introduced DNA containing XR, XD and XK genes, where the **yeast** ferments xylose to ethanol; the yeasts of (b) and (c) retain their capacity for fermenting xylose to ethanol when cultured under non-selective conditions for at least 20 generations. The **yeast** is produced by integrating multiple copies of exogenous DNA into **reiterated** chromosomal DNA of cells. The **yeast** produced by the integration method, even upon culture in non-selective medium for multiple generations (e.g. up to 20), retain their full capability to ferment xylose to ethanol.

ACCESSION NUMBER: AAV12829 DNA DGENE

TITLE: **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated** ribosomal DNA sites

INVENTOR: Chen Z; Ho N W Y

PATENT ASSIGNEE: (PURD) PURDUE RES FOUND.

PATENT INFO: WO 9742307 A1 19971113

66p

APPLICATION INFO: WO 1997-US7663 19970506

PRIORITY INFO: US 1996-16865 19960506

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 1997-558974 [51]

L6 ANSWER 7 OF 13 DGENE (C) 2003 THOMSON DERWENT

TI **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated ribosomal DNA** sites

AN AAV12828 DNA DGENE

AB This sequence is an amplification primer for the **yeast** Tn903 kanamycin resistance gene. The amplified sequence can be used in the **yeast** of the invention, which ferments xylose to ethanol. The **yeast** comprises: (a) xylose reductase (XR), xylitol dehydrogenase (XD) and xylulokinase (XK) genes integrated at each of its multiple **reiterated ribosomal DNA** sites; (b) multiple copies of exogenous DNA, including XR, XD, and XK genes, fused to non-glucose inhibited promoters integrated into its chromosomal DNA, where the **yeast** simultaneously ferments glucose and xylose to ethanol; or (c) multiple copies of an introduced DNA containing XR, XD and XK genes, where the **yeast** ferments xylose to ethanol; the yeasts of (b) and (c) retain their capacity for fermenting xylose to ethanol when cultured under non-selective conditions for at least 20 generations. The **yeast** is produced by integrating multiple copies of exogenous DNA into **reiterated** chromosomal DNA of cells. The **yeast** produced by the integration method, even upon culture in non-selective medium for multiple generations (e.g. up to 20), retain their full capability to ferment xylose to ethanol.

ACCESSION NUMBER: AAV12828 DNA DGENE

TITLE: **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated ribosomal DNA** sites

INVENTOR: Chen Z; Ho N W Y

PATENT ASSIGNEE: (PURD) PURDUE RES FOUND.

PATENT INFO: WO 9742307 A1 19971113

66p

APPLICATION INFO: WO 1997-US7663 19970506

PRIORITY INFO: US 1996-16865 19960506

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 1997-558974 [51]

L6 ANSWER 8 OF 13 DGENE (C) 2003 THOMSON DERWENT

TI **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated ribosomal DNA** sites

AN AAV12827 DNA DGENE

AB This sequence is an amplification primer for the **yeast** Tn903 kanamycin resistance gene. The amplified sequence can be used in the **yeast** of the invention, which ferments xylose to ethanol. The **yeast** comprises: (a) xylose reductase (XR), xylitol dehydrogenase (XD) and xylulokinase (XK) genes integrated at each of its multiple **reiterated ribosomal DNA** sites; (b) multiple copies of exogenous DNA, including XR, XD, and XK genes, fused to non-glucose inhibited promoters integrated into its chromosomal DNA, where the **yeast** simultaneously ferments glucose and xylose to ethanol; or (c) multiple copies of an introduced DNA containing XR, XD and XK genes, where the **yeast** ferments xylose to ethanol; the yeasts of (b) and (c) retain their capacity for fermenting xylose to ethanol when cultured under non-selective conditions for at least 20 generations. The **yeast** is produced by integrating multiple copies of exogenous DNA into **reiterated** chromosomal DNA of cells. The **yeast** produced by the integration method, even upon culture in non-selective medium for multiple generations (e.g. up to 20), retain their full capability to ferment xylose to ethanol.

ACCESSION NUMBER: AAV12827 DNA DGENE

TITLE: **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and

xylulokinase genes integrated at each of its multiple  
reiterated ribosomal DNA sites

INVENTOR: Chen Z; Ho N W Y

PATENT ASSIGNEE: (PURD) PURDUE RES FOUND.

PATENT INFO: WO 9742307 A1 19971113

66p

APPLICATION INFO: WO 1997-US7663 19970506

PRIORITY INFO: US 1996-16865 19960506

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 1997-558974 [51]

L6 ANSWER 9 OF 13 DGENE (C) 2003 THOMSON DERWENT

TI Yeast which ferments xylose to methanol - comprising xylitol  
reductase, xylitol dehydrogenase and xylulokinase genes integrated at  
each of its multiple reiterated ribosomal DNA  
sites

AN AAV12826 DNA DGENE

AB This sequence is an amplification primer for the yeast Tn903  
kanamycin resistance gene. The amplified sequence can be used in the  
yeast of the invention, which ferments xylose to ethanol. The  
yeast comprises: (a) xylose reductase (XR), xylitol dehydrogenase  
(XD) and xylulokinase (XK) genes integrated at each of its multiple  
reiterated ribosomal DNA sites; (b) multiple  
copies of exogenous DNA, including XR, XD, and XK genes, fused to  
non-glucose inhibited promoters integrated into its chromosomal DNA,  
where the yeast simultaneously ferments glucose and xylose to  
ethanol; or (c) multiple copies of an introduced DNA containing XR, XD  
and XK genes, where the yeast ferments xylose to ethanol; the  
yeasts of (b) and (c) retain their capacity for fermenting xylose to  
ethanol when cultured under non-selective conditions for at least 20  
generations. The yeast is produced by integrating multiple  
copies of exogenous DNA into reiterated chromosomal DNA of  
cells. The yeast produced by the integration method, even upon  
culture in non-selective medium for multiple generations (e.g. up to 20),  
retain their full capability to ferment xylose to ethanol.

ACCESSION NUMBER: AAV12826 DNA DGENE

TITLE: Yeast which ferments xylose to methanol -  
comprising xylitol reductase, xylitol dehydrogenase and  
xylulokinase genes integrated at each of its multiple  
reiterated ribosomal DNA sites

INVENTOR: Chen Z; Ho N W Y

PATENT ASSIGNEE: (PURD) PURDUE RES FOUND.

PATENT INFO: WO 9742307 A1 19971113

66p

APPLICATION INFO: WO 1997-US7663 19970506

PRIORITY INFO: US 1996-16865 19960506

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 1997-558974 [51]

L6 ANSWER 10 OF 13 DGENE (C) 2003 THOMSON DERWENT

TI Yeast which ferments xylose to methanol - comprising xylitol  
reductase, xylitol dehydrogenase and xylulokinase genes integrated at  
each of its multiple reiterated ribosomal DNA  
sites

AN AAV12825 DNA DGENE

AB This sequence represents an amplification primer for the yeast  
5S rDNA sequence. The amplified sequence can be used in the yeast  
of the invention, which ferments xylose to ethanol. The yeast  
comprises: (a) xylose reductase (XR), xylitol dehydrogenase (XD) and  
xylulokinase (XK) genes integrated at each of its multiple  
reiterated ribosomal DNA sites; (b) multiple  
copies of exogenous DNA, including XR, XD, and XK genes, fused to  
non-glucose inhibited promoters integrated into its chromosomal DNA,  
where the yeast simultaneously ferments glucose and xylose to

ethanol; or (c) multiple copies of an introduced DNA containing XR, XD and XK genes, where the **yeast** ferments xylose to ethanol; the yeasts of (b) and (c) retain their capacity for fermenting xylose to ethanol when cultured under non-selective conditions for at least 20 generations. The **yeast** is produced by integrating multiple copies of exogenous DNA into **reiterated** chromosomal DNA of cells. The **yeast** produced by the integration method, even upon culture in non-selective medium for multiple generations (e.g. up to 20), retain their full capability to ferment xylose to ethanol.

ACCESSION NUMBER: AAV12825 DNA DGENE

TITLE: **Yeast** which ferments xylose to methanol - comprising xylitol reductase, xylitol dehydrogenase and xylulokinase genes integrated at each of its multiple **reiterated** ribosomal DNA sites

INVENTOR: Chen Z; Ho N W Y

PATENT ASSIGNEE: (PURD) PURDUE RES FOUND.

PATENT INFO: WO 9742307 A1 19971113 66p

APPLICATION INFO: WO 1997-US7663 19970506

PRIORITY INFO: US 1996-16865 19960506

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 1997-558974 [51]

L6 ANSWER 11 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI THE MAJOR PROMOTER ELEMENT OF RIBOSOMAL RNA TRANSCRIPTION IN **YEAST** LIES 2 KILOBASE PAIN UPSTREAM.

AB Conventional genetic analysis of the transcription of rDNA [**ribosomal DNA**] in **yeast** is precluded because the genes are highly **reiterated**. As an alternative strategy to determine which sequences modulate transcription of pre-rRNA, a series of artificial rRNA genes containing a fragment of DNA from *Escherichia coli* bacteriophage T7 were introduced into the **yeast** *Saccharomyces cerevisiae*. Correct transcription of the artificial genes was observed. Three regions of ribosomal spacer affected transcription of rRNA. Sequences within 210 bp [base pair] of the 5' terminus of 35S rRNA support low levels of transcription, but at multiple initiation points. Sequences from -210 to -2230 direct correct initiation and increase somewhat the efficiency of transcription. Most striking is that sequences from -2230 to -2420 stimulate transcription 15-fold. The function of this major promoter element is absolutely orientation-dependent but relatively independent of position. Its activity is blocked when an rRNA transcription termination sequence is placed between it and the site of initiation.

ACCESSION NUMBER: 1985:278527 BIOSIS

DOCUMENT NUMBER: BA79:58523

TITLE: THE MAJOR PROMOTER ELEMENT OF RIBOSOMAL RNA TRANSCRIPTION IN **YEAST** LIES 2 KILOBASE PAIN UPSTREAM.

AUTHOR(S): ELION E A; WARNER J R

CORPORATE SOURCE: DEP. BIOCHEM., ALBERT EINSTEIN COLL. MED., BRONX, N.Y. 10461.

SOURCE: CELL, (1984 (RECD 1985)) 39 (3 PART 2), 663-674.  
CODEN: CELLB5. ISSN: 0092-8674.

FILE SEGMENT: BA; OLD

LANGUAGE: English

L6 ANSWER 12 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI REPLICON SIZE OF **YEAST** RIBOSOMAL DNA.

AB The ribosomal RNA of the **yeast** *Saccharomyces cerevisiae* are transcribed from a 9kbp [kilobase pair] stretch of DNA which is **reiterated** .apprx. 120-fold in a continuous array, .apprx. 360 .mu.m long, on chromosome XII. Although ARS activity has been detected in the repeat unit, the size and disposition of replicons along this array of identical genes has not been determined. Immobilized rRNA was used as a probe to examine the size of radioactively labeled rDNA replicons resolved on alkaline sucrose gradients. The replicons were uniformly sized, .apprx.

5 repeat units in length, and groups of 4 adjacent replicons may be activated simultaneously. Replicon initiation events are not determined solely by the recognition of specific DNA sequences that function as origins of replication.

ACCESSION NUMBER: 1984:347097 BIOSIS  
DOCUMENT NUMBER: BA78:83577  
TITLE: REPLICON SIZE OF YEAST RIBOSOMAL  
DNA.  
AUTHOR(S): WALMSLEY R M; JOHNSTON L H; WILLIAMSON D H; OLIVER S G  
CORPORATE SOURCE: DEP. BIOCHEM. AND APPLIED MOLECULAR BIOL., UNIV. MANCHESTER  
INST. SCIENCE AND TECHNOL., P.O. BOX 88, MANCHESTER M60  
1QD, U.K.  
SOURCE: MOL GEN GENET, (1984) 195 (1-2), 260-266.  
CODEN: MGGEAE. ISSN: 0026-8925.  
FILE SEGMENT: BA; OLD  
LANGUAGE: English

L6 ANSWER 13 OF 13 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.  
TI SIMPLE MENDELIAN INHERITANCE OF THE REITERATED RIBOSOMAL  
DNA OF YEAST.

AB A diploid strain of **yeast** (*Saccharomyces cerevisiae*) was heterozygous for 2 forms of the highly repetitive **ribosomal DNA**. These forms could be distinguished by the pattern of fragments produced after digestion with the site-specific restriction endonuclease EcoRI. The mode of inheritance of **ribosomal DNA** was determined by tetrad analysis. Of 14 tetrads analyzed, 12 clearly showed the **ribosomal DNA** forms segregating as a single Mendelian unit. The simplest interpretation of this result is that all of the approximately 100 copies of the **ribosomal DNA** genes of the **yeast** cell are located on 1 chromosome and that meiotic recombination within these genes is suppressed. Two of the 14 tetrads showed the segregation patterns expected as the result of mitotic recombination within the **ribosomal DNA**. [The DNA probe was prepared from an *Escherichia coli* strain].

ACCESSION NUMBER: 1978:158913 BIOSIS  
DOCUMENT NUMBER: BA65:45913  
TITLE: SIMPLE MENDELIAN INHERITANCE OF THE REITERATED  
RIBOSOMAL DNA OF YEAST.  
AUTHOR(S): PETES T D; BOTSTEIN D  
CORPORATE SOURCE: DEP. MICROBIOL., 920 E. 58TH ST., UNIV. CHIC., CHICAGO,  
ILL. 60637, USA.  
SOURCE: PROC NATL ACAD SCI U S A, (1977) 74 (11), 5091-5095.  
CODEN: PNASA6. ISSN: 0027-8424.  
FILE SEGMENT: BA; OLD  
LANGUAGE: English

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..=> s yeast and fermentation  
L1 40441 YEAST AND FERMENTATION

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=> s 11 and xylose
L2      4099 L1 AND XYLOSE

=> s 12 and integrate yeast chromosome
L3      0 L2 AND INTEGRATE YEAST CHROMOSOME

=> s integrate yeast chromosome
L4      1 INTEGRATE YEAST CHROMOSOME

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L4  ANSWER 1 OF 1  WPIDS (C) 2003 THOMSON DERWENT
TI  Yeast derived vector contg. gene for antibiotic resistance - controlled by
yeast or synthetic promoter, able to integrate with yeast chromosome.
AN  1985-304934 [49]  WPIDS
CR  1986-332093 [50];  1996-189959 [20]
AB  EP  163491 A UPAB: 19960529
Vector includes a gene for resistance to an antibiotic normally able to
kill a host yeast cell, and the gene is transcribed from a yeast or
synthetic promotor sequence. The vector can be integrated into a
chromosome of the yeast host.
The vector may also contain (1) a gene heterologous to the host and
(2) a homologous sequence of the chromosome, inserted in such a way that
no interference with host metabolism occurs.
USE/ADVANTAGE - Yeast cells transformed with the vectors express e.g.
glucoamylase (able to convert starch to glucose which is the converted to
CO2 or EtOH, for use in dough making or brewing). Those expressing malate
permease are useful in wine making because they can eliminate malic acid.
The heterologous gene can also express a therapeutically useful protein,
e.g. interferon. These vectors are stable over many generations even in
the absence of selection.
Dwg.0/4
Dwg.0/4
ABEQ EP  163491 B UPAB: 19960428
A yeast cell transformed by integration into a chromosome thereof of
vector DNA; characterised in that the host yeast cell is an industrial
non-haploid yeast cell; in that the vector DNA comprises a gene for
resistance to an antibiotic otherwise capable of killing said yeast cell,
said gene being transcribed from a promoter sequence which is capable of
promoting the expression of said antibiotic resistance gene at a level
which confers antibiotic resistance to said cell; in that said vector DNA
comprises a sequence homologous with a sequence of said chromosome and is
integrated therein; and in that said vector DNA further comprises a gene
for a desired heterologous protein.
Dwg.0/4
ACCESSION NUMBER: 1985-304934 [49]  WPIDS
CROSS REFERENCE: 1986-332093 [50];  1996-189959 [20]
DOC. NO. CPI: C1985-131759
TITLE: Yeast derived vector contg. gene for antibiotic
resistance - controlled by yeast or synthetic promoter,
able to integrate with yeast chromosome.
DERWENT CLASS: B04 D16
INVENTOR(S): YOCUM, R R
PATENT ASSIGNEE(S): (YOCU-I) YOCUM R R; (OMNI-N) OMNIGENE INC; (BIOY)
BIOTECHNICA INT INC
COUNTRY COUNT: 7
PATENT INFORMATION:

PATENT NO      KIND DATE      WEEK      LA      PG
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EP 163491      A  19851204 (198549)* EN  27
AU 8542709     A  19851128 (198604)
BR 8502400     A  19860121 (198610)
FI 8502024     A  19851123 (198611)

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JP 61040793 A 19860227 (198615)  
DK 8502241 A 19851123 (198617)  
EP 163491 B1 19960327 (199617) EN 20  
DE 3588096 G 19960502 (199623)  
CA 1338857 C 19970121 (199715)

APPLICATION DETAILS:

| PATENT NO  | KIND | APPLICATION     | DATE     |
|------------|------|-----------------|----------|
| EP 163491  | B1   | EP 1985-303625  | 19850522 |
| DE 3588096 | G    | DE 1985-3588096 | 19850522 |
|            |      | EP 1985-303625  | 19850522 |
| CA 1338857 | C    | CA 1985-481908  | 19850521 |

FILING DETAILS:

| PATENT NO  | KIND       | PATENT NO |
|------------|------------|-----------|
| DE 3588096 | G Based on | EP 163491 |

PRIORITY APPLN. INFO: US 1984-612796 19840522